

REPLY

In the August 11, 2004 Office Action Summary, the Examiner rejects all claims pending in the application (claims 1-42). Upon entry of the foregoing amendments, Applicants amend claims 1, 3-8, 10, 14, 16-18, 20-34 and 36-42. Applicants also add new claims 43-58. Applicants submit the above amendments to address issues of claim dependency and to more appropriately claim that to which the Applicants are entitled. All amendments are fully supported by the specification, drawings and claims as originally filed. No new matter is included in the amendments. After entry of this Reply, claims 1-58 (8 independent claims; 58 total claims) remain pending in the application.

35 U.S.C. § 112 REJECTIONS

The Examiner rejects claims 1-35, 39 and 40 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the Applicants regard as the invention. Particularly, the Examiner notes that each independent claim associated with the above claims includes a limitation that a transponder system interfaces with the card surface. As to claims 26 and 27, the Examiner notes that the claims recite the limitation of "said transponder system protocol sequence controller" without proper antecedent basis. Regarding claims 5, 6, 16-18, and 20-22, the Examiner suggests that the claims are indefinite because amounts are given in weight. The Examiner also rejects claims 24-27, 29, 31 and 32 under 35 U.S.C. § 112 as being dependent on the corresponding rejected base claims.

Applicants amend the identified independent claims to clarify that the card surface is overlays the transponder system. Applicants also amend claims 16-18 and 20-22 to clarify the relative percent/weight of each ingredient of the overall composition given by each claimed percent/weight of material. Additionally, Applicants amend claims 26 and 27 to clarify each claim's dependency from claim 24, which provides proper antecedent basis for "said transponder system protocol sequence controller."

Thus, Applicants respectfully submit that Applicants' amendments render the Examiner's 35 U.S.C. § 112 rejections moot. Applicants request withdrawal of the Examiner's section 112 rejections in view of the Applicants' amendments.

35 U.S.C. § 103 REJECTIONS

The Examiner's section 103 obviousness rejections are derived from, and depend upon, an improper combination of the Kilmer (GB-A-1,371,254) and Mundigl et al. (U.S. Patent No. 5,809,633) references. As described more fully below, the combination of Kilmer and Mundigl does not sustain a proper section 103 rejection.

First, no motivation or suggestion exists to combine the Kilmer and Mundigl references, in the references themselves or in the knowledge generally available to one skilled in the art. Second, even were Kilmer and Mundigl properly combinable, there would be no reasonable expectation of success since the combination of references would be inoperable for its intended purpose, *i.e.*, to provide a coded card exhibiting substantially uniform transmissivity to light. Lastly, the combination of the Kilmer and Mundigl references would not disclose all the elements of the Applicants' claimed invention. Thus, the combination of the Kilmer and Mundigl references is improper for establishing a *prima facie* case of a section 103 rejection. In accordance with the arguments set forth below, Applicants' claimed invention is patentable over all references cited by the Examiner, since all the Examiner's rejections depend upon and are derived from an improper combination of the Kilmer and Mundigl references. As such, Applicants respectfully request reconsideration and allowance of all claims pending in the application.

Claims 1, 2, 4, 5, 7-11, 13, 14, 19, 23, 25 and 28-42

The Examiner rejects claims 1, 2, 4, 5, 7-11, 13, 14, 19, 23, 25 and 28-42 under 35 U.S.C. § 103(a) as being unpatentable over Kilmer (GB-A-1,371,254) in view of Mundigl et al. (U.S. Patent No. 5,809,633). Applicants respectfully traverse these rejections. Particularly, the Examiner asserts that Kilmer teaches a card that is transparent in the visible range, the card including a plurality of layers permeable to visible light. The Examiner also notes that the

readability of the card is based on gallium arsenide detectors, and that there is coding in the card in the form of perforations.

The Examiner acknowledges that Kilmer fails to teach that the card contains one or more transponders. However, the Examiner suggests that Mundigl teaches a card with a RFID system, and that it would have been obvious to one of ordinary skill in the art at the time the invention was made to include the old and well-known RFID transponders of Mundigl in the card of Kilmer because this permits sophisticated data exchange with the card by radio.

Applicants note that Kilmer teaches a "coded card" comprising a first film and second film having different absorption characteristics at a substantially single frequency lying within an optical band pass in the non-visible region. The coded card is encoded by either selectively aperturing the second film prior to lamination or laminating discrete portion of the second film upon selected areas of the first film. (See, e.g., Kilmer, lines 13-26.) In the preferred embodiment of the Kilmer invention, the card is formed from a film of PVC laminated on a film of copolymer of vinyl chloride and vinylacetate (PVAC). Indicia (information encoded into the card) may be encoded onto the card by selectively aperturing the PVAC layer by punching holes before lamination, and filling the wholes with PVC thereafter. Alternatively, the encoding can be accomplished by deposition of PVAC strips onto discrete pre-selected areas of the PVC film by a rapid evaporation process. (See e.g., Kilmer, lines 52-61.) As such, Kilmer teaches a card that has information encoded in the card body, where the encoding is optically indistinguishable in visible light. As acknowledged by the Examiner, Kilmer does not teach that the coded card contains one or more transponders.

No teaching or motivation to combine the reference exists.

Applicants note that not only does Kilmer not teach a card containing transponders, there is no motivation, suggestion or teaching in Kilmer or Mundigl to make the modification suggested by the Examiner. Particularly, Kilmer teaches a card having information encoded in the card layers, where the encoding is achieved via the differing absorption properties of the layers. That is, the Kilmer invention provides information optically using encoded portions of

the card body. Kilmer does not suggest, teach or disclose conveying information in any other way using its card body. More particularly, Kilmer does not teach, suggest, or disclose exchanging information by radio, as suggested by the Examiner. As such, one skilled in the art at the time the invention was made would not have been motivated to include in the Kilmer card body any other information conveying device such as a smartcard chip or smartcard module disclosed in Mundigl.

Moreover, Mundigl teaches bonding one end of a thin wire onto a first contact zone of a semiconductor chip (*e.g.*, smartcard module), guiding the wire in a plurality of turns forming an antenna coil, bonding the wire onto a second contact already on the semiconductor chip and placing the turns of wire and the semiconductor chip on a carrier body. (*See* Mundigl, column 1, lines 54-60.) Inherent in Mundigl is that information is transferred from the semiconductor chip to the coil to a recipient. As such, one skilled in the art also would not have been motivated to include the smartcard module of Mundigl in the carrier body of Kilmer since information in the Kilmer invention is already encoded in the Kilmer carrier body. Applicants can find no technological motivation for the combination suggested by the Examiner. Indeed, one skilled in the art would have disincentive to try the combination since Kilmer and Mundigl teach different forms of exchanging information.

Additionally, Mundigl teaches a system and method for providing a smartcard module for contactless smartcards. (*See* Mundigl, column 1, lines 46-47.) Mundigl does not teach, suggest or disclose adding the smartcard module to a transparent coded card body. Moreover, Kilmer does not teach, suggest or disclose a smartcard. Instead, Kilmer teaches a card body which conveys information optically using the absorption property of the card body's transparent surface. Since Kilmer does not teach, suggest or disclose a smartcard, and Mundigl does not teach, suggest or disclose adding its smartcard module to a transparent coded card body, then one skilled in the art at the time the invention was made would not have been motivated to include the smartcard module of Mundigl in the transparent coded card body of Kilmer.

There is no expectation of success in the Kilmer and Mundigl combination

Even if the Mundigl and Kilmer references were combined, the resulting combination would render the Kilmer invention inoperable for its intended purpose. Particularly, Kilmer is directed toward a coded card, which exhibits uniform transmissivity within an optical band pass in the non-visible region. (See Kilmer, page 1, lines 12-36.) The Kilmer coded card conveys information by measuring the amount of light absorbed by the card body relative to the concentration of the absorption material. The amount of light absorbed is measured in accordance with Beers' Law. (See Kilmer, page 2, lines 1-20.) Inherent in Kilmer is that the information is optically received from the coded card by measuring the absorption of the light transmitted through the card body. Any unwanted interference of the light transmitted through the card body would necessarily interfere with the reading of the card's coded regions.

On the other hand, Mundigl teaches a semiconductor chip and an antenna. Mundigl does not teach, suggest, or disclose that these components are transparent. Indeed, it is common knowledge that such components are ordinarily opaque. Mundigl does not teach, suggest, or disclose otherwise. **Thus, if Kilmer and Mundigl were combined, then the resulting combination would include opaque components (e.g., smartcard module and antenna). These opaque components would necessarily interfere with the absorption of the light passing through the coded region of the card body.**

For example, light passing through the coded region of the card would be reflected from, or absorbed by, the antenna or chip components, thereby interfering with reading of the coded region. Consequently, one skilled in the art would not have been motivated to combine the Kilmer and Mundigl references since the resulting combination would not exhibit the substantially uniform transmissivity as required by Kilmer. More particularly, the resulting combination would destroy the intended function of Kilmer to provide a card exhibiting substantially uniform transmissivity to light in the visual region, which is encoded with transparent indicia.

According to the above, the Kilmer and Mundigl references are not proper references for sustaining a prima facie section 103 rejection. Since, the Kilmer and Mundigl references contain no teaching, suggestion, or motivation to combine the references as proposed by the Examiner, and there is no likelihood that the invention would be successful for its intended purposes (*e.g.*, the functionality of Kilmer would be destroyed), then to combine the Kilmer and Mundigl references would involve impermissible picking and choosing of the various missing claimed elements using hindsight reasoning in an attempt to recreate the claimed invention with Applicants' disclosure as the basis. Without using impermissible hindsight reasoning, it would not have been obvious to one of ordinary skill in the art at the time of the invention to modify the references to include the missing claimed elements as suggested by the Examiner. It is not enough that the invention may be made, or that it would have been obvious to try the proposed combination, there must be some suggestion or motivation to combine the references in the references themselves. Applicants respectfully submit that no motivation exists in Mundigl and Kilmer references, and therefore, the Examiner's section 103 rejection of the claims should be withdrawn.

Dependent Claims

The Examiner variously rejects claims 2, 4, 5, 7, 8-10, 14, 31, 32, 34, 35, and 38 under 35 U.S.C. § 103 citing the Kilmer and Mundigl combination of references. However, dependent claims 2-32, 34-35, and 38 incorporate the limitations of the independent claims from which they depend. Namely, dependent claims 2-32 variously incorporate the limitations of patentable independent claim 1; dependent claims 34-35 incorporate the limitations of patentable independent claim 33; and dependent claim 38 variously depends from and incorporates the limitations of patentable independent claim 37. As such, dependent claims 2, 4, 5, 7, 8, 9, 10, 14, 31, 32, 34, 35, and 38 are allowable for at least the reasons described above with respect to the independent claims as well as in view of their own respective features. Therefore, Applicants respectfully request the Examiner also withdraw the rejection of these dependent claims.

Combined References do not disclose all limitations of Applicants' NEW claims

Applicants add new dependent claims 43-53 to more completely claim that to which the Applicants are entitled. All new claims added by the Applicants variously depend from and incorporate the limitations of the patentable independent claims from which they depend. For example, dependent claims 43-47 variously incorporate the limitations of patentable independent claim 1; dependent claims 48 and 49 incorporate the limitations of patentable independent claim 33; dependent claim 50 variously depends from and incorporates the limitations of patentable independent claim 39; dependent claim 51 variously depends from and incorporates the limitations of patentable independent claim 40; dependent claim 52 variously depends from and incorporates the limitations of patentable independent claim 41; and dependent claim 53 variously depends from and incorporates the limitations of patentable independent claim 42. As such, new dependent claims 43-53 are also patentable over the cited references.

Applicant's new dependent claims 47-53 are patentable over the cited references for another reason. Namely, the cited references do not teach or suggest all the limitations of the new dependent claims. More particularly, new dependent claims 47-53 include the limitation that the "machine recognizable compound substantially blocks infrared light from being transmitted" through the card surface layer.

Applicants transparent card layer acts differently than the transparent card body of Kilmer, in that Kilmer teaches a card body transparent in at least one non-visible region, namely infrared (*see* Kilmer, page 1, lines 35-40). Kilmer does not teach a "machine recognizable compound" that "substantially blocks infrared light." In fact, Kilmer teaches away from the Applicants' claimed invention, since Kilmer teaches a card body transparent in the infrared region. Thus, even were the Kilmer and Mundigl references properly combinable, the combination fails to teach, advise, or suggest a machine recognizable surface that substantially blocks infrared light. The Kilmer and Mundigl, references taken singly or in combination do not support a proper section 102 novelty or 103 obviousness rejection since the combination does not teach or suggest all Applicants' claim limitations. Therefore, Applicants respectfully assert that,

new dependent claims 47-53 are also patentable over the cited references, for the additional reason discussed above.

After consideration of the Applicants' amendments, Applicants respectfully submit that all of the claims in the application (claims 1-58: 8 independent, 58 total claims) fully comply with 35 U.S.C. § 112 and are patentable over the prior art of record. Consequently, allowance of all remaining claims is earnestly solicited.

Should the Examiner wish to discuss any of the above in greater detail or deem that amendments should be made to improve the form of the claims, then the Examiner is invited to telephone the undersigned at the Examiner's convenience. **The Examiner is permitted to charge any fees regarding this Amendment, or credit any overpayment, to deposit account No. 19-2814.** A duplicate copy of this request is enclosed for your use.

Respectfully submitted, *Reg. No. 51,337*

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By

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